Framework for Learning:

Leader's Name: ……

Co-Leader's Name: ……..

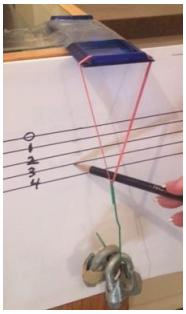
Linear Relations – Elastic–1 STEAM

Instructor's Initials: …….

Getting Started

Log into UMathX

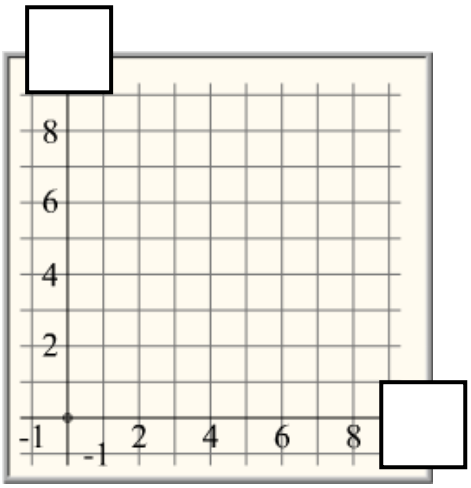
In the **Content Menu** follow the path:
Graphing> Linear Relations> **The Elastic Example**
Select and complete: **Set Up Equations** and**Graph**



Complete the corresponding graph, table, and notes below.

Setup and work through a similar real situation as shown above.

# of Washers (N)	Stretch in cm (S)



Equation:

Restrictions:

N ☐ ____

S ☐ ____

Unit Rate:

_____cm per _____

A **table of values** helps us to see_____and find a(n)_____.

We can join the points if_____of washers may be used.

Remember:

A **relation** may be represented by the following: 1)_____; 2)_____;
and 3)_____.

Remember from a previous lesson that a **function** is a special **relation**. Is the above **relation** a **function**? **Justify** your reasoning.

_____

_____

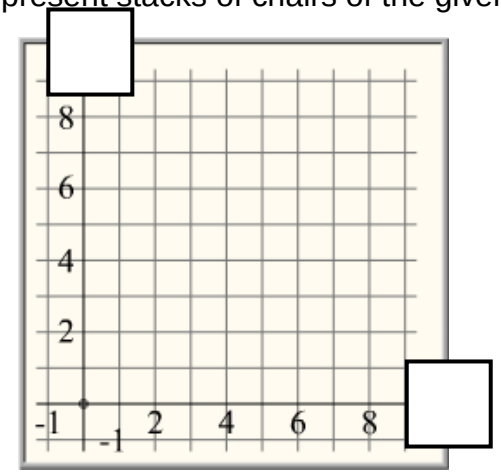
_____

Working In It:

A custodian is stacking chairs for elementary students in the gym. Each chair is 2 feet tall. When a second chair is added to the stack, the height of the stack becomes 2.25 feet.

Complete the **table of values** to represent stacks of chairs of the given heights.

# of Chairs (C)	Height in ft (H)
1	
2	
3	
5	
7	



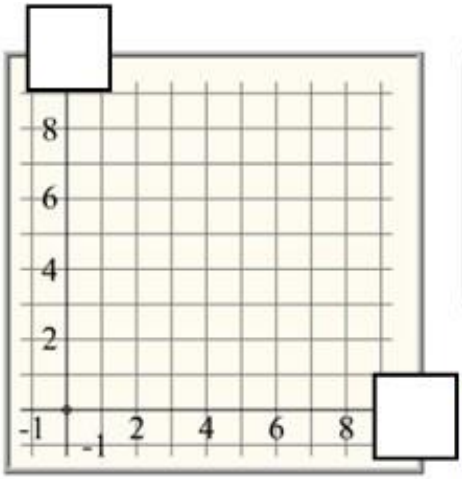
Plot the ordered pairs on the grid.
Label both axes and **label** each point with its corresponding ordered pair.

Write an **equation** to represent the **relation**. **Equation:** _____

Reflect And Connect:

The **table of values** below represents data recorded for washers hung from an elastic like those in *Getting Started*.

# of Washers (N)	Stretch in cm (S)
0	0
0.5	2
1	4
1.5	6
2	8



Equation:

_____

Restrictions:

N ☐ _____

S ☐ _____

Unit Rate:

_____ cm per _____

Plot the ordered pairs on the grid.
Label both axes.
Label each point with its corresponding ordered pair.
Write an **equation** to represent the **relation.** **List** any restrictions. **Calculate** and **record** the **unit rate.**

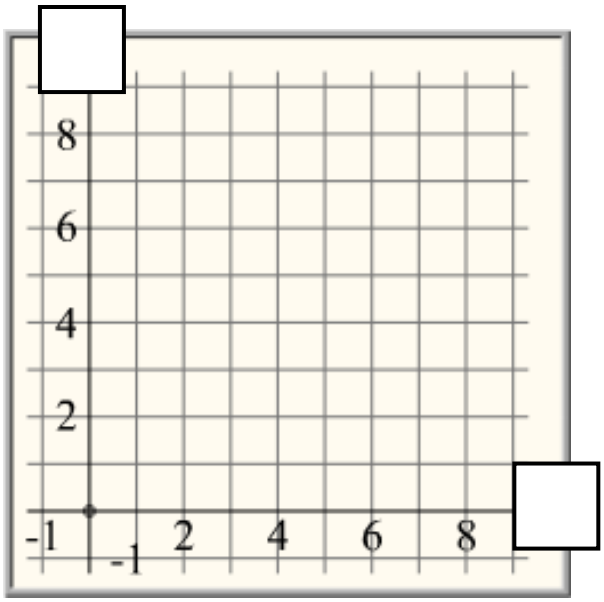
Compare and contrast the **equation**, graph, restrictions, and **unit rate** above with those completed in *Getting Started*. **Discuss** your observations with a partner. **Write** a summary of your discussion on a separate sheet of paper.

Build It. Draw It. Talk It. Write It. Now you OWN It!

STEAM Activity

Build stacks of paper cups as described in the table below.
Measure and record the height in centimeters of each stack.
Plot the ordered pairs on the grid.
Label both axes and **label** each point with its corresponding ordered pair.

# of Cups (C)	Height in cm (H)
1	
2	
3	
5	
7	



Equation: _____

Write a brief paragraph describing how you derived the equation above from the data.

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